events

Advanced Cooling Strategies/Technologies Conference

Air-Cooled Steam Condensers and Dry- and Hybrid-Cooling Towers Seminar

Program: Facilities Water Management (56)

To generate electricity, all steam-electric power plants require cooling. Many power plants are considering or installing alternate cooling technologies to address increased scarcity of water, site development options, discharge restrictions, environmental concerns and permitting delays. These technologies include direct dry cooling, indirect dry cooling (Heller system), hybrid wet/dry cooling, and use of reclaimed or degraded water for wet cooling. EPRI and California Energy Commission (CEC) are sponsoring an Advanced Cooling Strategy/ Technologies Conference to disseminate current information on the use of such technologies. This conference brings together utility representatives, manufacturers, consultants and regulators. It will also provide a forum for exchanging and disseminating knowledge and experience, and identifying major problems and establish a clear understanding of priorities for additional R&D to improve technologies and encourage their use.

Who Should Attend

Utility managers, engineers, manufacturers, engineering consultants, regulators, and research scientists involved in cooling system reliability and performance, plant siting and development, plant life extension, and plant operation and maintenance are invited.

Sponsors

- CA Energy Commission
- EPRI—Facility Water Management Program

Registration Contact

Donna Petersen, EPRI Processing, 1355 Willow Way, Suite 278, Concord, CA 94520-5728, phone: 925.609.9568, fax: 925.609.1310, meeting@epri.com

Technical Contact

John L. Tsou, 56 Williams Lane, Foster City, CA 94404, phone: 650.573.8942, Jtsou@sbcglobal.net

Logistical Contact

Ana Montes, EPRI, phone: 650.855.2165, amontes@epri.com

Air-Cooled Steam Condensers and Dry- and Hybrid-Cooling Towers Seminar
May 31, 2005
$300 per person

Advanced Cooling Strategies/Technologies Conference
June 1–2, 2005
There is no charge for this event, but attendee must pre-register.

Sacramento Convention Center
Room 204
1400 J Street
Sacramento, CA

November 2004 1011213

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Air-Cooled Steam Condensers and Dry- and Hybrid-Cooling Towers Seminar (E218265)
May 31, 2005, Sacramento, CA

__I am interested in attending the Air-Cooled Condensers Seminar, May 31, 2005. The seminar will cost $300.

Method of Payment:
__ I will send a check, payable to EPRI, Attn: Conference Registration
__ I would like to pay by credit card, using the card listed below:
__ ☐ MasterCard ☐ Visa ☐ American Express

Cardholder's name _____

Card Number _____

Expiration Date _____

Signature of cardholder _____

Advanced Cooling Strategies/Technologies Conference
June 1–2, 2005, Sacramento, CA (E218265)

__I am registering to attend the Advanced Cooling Strategies/Technologies Conference, June 1–2, 2005. There is no charge for this event, but attendees must pre-register. Attendance limited to 300.

Name _____

Title/Department _____

Organization _____

Address _____

City/State/Zip _____

Phone _____ Fax _____

E-mail address _____

Return the completed registration form with payment to Conference Registration Specialist, EPRI, 1355 Willow Way, Suite 278, Concord CA 94520-5728 or fax to 925.609.1310. To register via e-mail, send information to meeting@epri.com

Accommodations

Attendees are responsible for making their own hotel room reservations. A listing of hotels in downtown Sacramento within walking distance of the Convention Center is provided below.

Hyatt Regency, 1209 L Street, Sacramento, CA 95814, phone: 916.443.1234

Sheraton Grand, 1303 J Street, Sacramento, CA 95814, phone: 916.447.1700

Clarion Hotel, 700 16th Street, Sacramento, CA 95814, phone: 800.443.0880

Best Western Sutter House, 1100 H Street, Sacramento, CA 95814, phone: 800.830.1314

The Sterling Hotel, 1300 H Street, Sacramento, CA 95814, phone: 800.365.7660

Econo Lodge, 711 16th Street, Sacramento, CA 95814, phone: 800.55.ECONO

Seminar Facilitator

Professor Detlev Kroger from the University of Stellenbosch in Matieland, South Africa will lead this seminar on the history, worldwide installations, technical aspects, design and operation guidance, and testing of air-cooled condensers (ACC's). Prof. Kroger is widely regarded as leading expert in ACC technology. Each participant will receive a copy of Prof. Kroger's textbook on the subject, which will be used as the basis for the seminar. The charge for attending this seminar will be used to cover expenses and provide a copy of the textbook for each attendee.

Preliminary Agenda for Seminar

Tuesday, May 31, 2005, Morning

8:00 Registration

9:00 Session 1

- An Introduction (History And Development) to Air-Cooled Steam Condensers and Dry- And Hybrid-Cooling Towers World-Wide
- Visible Plume Abatement (Dry-Wet, Wet-Dry and Hybrid Towers)
- Heat Transfer Surfaces (Extended Surfaces)

10:15 Break

10:30 Session 2

- Testing and Quality Control of Finned Tubes
- Oblique Flow Through Finned Tube Bundles
- Corrosion, Erosion and Fouling

12:00 Lunch (provided)

1:00 Session 3

- Thermal Contact and Gap Resistance in Finned Tubes
- Fan Testing And Performance Characteristics
- Fan Blade Tip Clearance, Noise, Plenum Chamber Losses, System Effects
- Air-Cooled Heat Exchangers and Dry-Cooling Towers

3:00 Break

3:15 Session 4

- Air-Cooled Steam Condensers (Non-Condensables, Flooding, Entrainment)
- Flow Resistance, Hot Plume Air Recirculation
- Meteorological Effects (Winds, Recirculation And Interference, Temperature Inversions)
- Design and Optimization (Life Cycle Costing Etc.) of Cooling Plant for Power Generation

5:00 Adjourn

Preliminary Agenda for Conference

Wednesday, June 1, 2005, Morning

Plenary Session

- 7:00 Registration
- 8:00 Opening Remark (CEC/EPRI/DOE)
- 8:30 Keynote Speakers—John L. Geesman, J.D., Commissioner, California Energy Commission; Tom Feeley, USDOE National Energy Technology Center (Tentative)

Session 1: Alternative Cooling Technologies

- 10:00 Water Conservation Options for Wet-Cooled Power Plants—John Maulbetsch, Consultant
- 10:30 Closed Loop, Evaporative Wet Surface Air Coolers For Steam Condensing and Aux Loop Cooling in Water Limited Power Plants—Peter Demakos, Niagara Blower Company
- 11:00 Innovative Cooling System For Heat and Flow Reduction At Brayton Point Station—Thomas Englert, LMS Engineering
- 11:30 The Advanced Heller System—Technical Features and Characteristics—Andras Balogh, GEA-EGI
- 12:00 Lunch Break

Session 2: Cost and Performance Issues

- 1:00 Cost/Performance Comparisons of Alternative Cooling Systems—John Maulbetsch, Consultant
- 1:30 Energy Penalty Consideration for Wet and Dry Cooling Systems at New Power Plants (tentative)—Wayne Micheletti, Consultant.
- 2:00 Peak and Annual Average Energy Efficiency Penalty of Optimized Air-Cooled Condenser on 500 MW Fossil Fuel-Fired Utility Boiler—Bill Powers, Powers Engineering
- 2:30 The Advanced Heller System to Improve Economics of Power Generation—Andras Balogh, GEA-EGI
- 3:00 Break
- 3:30 Panel Discussion: Research and Development Needs
- 5:00 Adjourn

Thursday, June 2, 2005, Morning

Session 3: Air-Cooled Condenser Technologies

- 8:00 Spray Cooling—An Approach to Performance Enhancement of Air-Cooled Condensers—Pat Morris, Crockett Cogeneration; John Maulbetsch and Mike DiFilippo, Consultants
- 8:30 Spray Enhancement of Alternative Cooling System—John Maulbetsch, Consultant
- 9:00 Development of Procurement Guidelines for Air-Cooled Condensers—Karl Wilber, Consultant
- 9:30 Break

Session 4: Degraded Water Use

- 10:00 The Use of Oil-Field Produced Water as an Alternative Source of Power Plant Cooling Water—Mike DiFilippo, Consultant
- 10:30 Non-Chemical Water Treatment—Michael Gravely, Consultant
- 11:00 Q&A and Wrap-Up
- 12:00 Adjourn

EPRI • 3412 Hillview Avenue, Palo Alto, California 94304
PO Box 10412, Palo Alto, California 94303 USA
800.313.3774 • 650.855.2121 • askepri@epri.com • www.epri.com